CLAIMS:

What is claimed is:

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1.   A method in a data processing system for managing a program, the method comprising:

monitoring operation of the program;

comparing an observed operation of the program with an expected operation of

10   the program to form a comparison;

determining whether an error has occurred based on the comparison;

responsive to an occurrence of the error, obtaining a solution for the error; and

implementing the solution when the solution is obtained.

15   2.   The method of claim 1, wherein the obtaining step comprises:

automatically executing a process to analyze the error to obtain an analysis;

sending the analysis to a remote server with a request for the solution; and

receiving the solution in response the request.

20   3.   The method of claim 1, wherein the solution is at least one of a replacement executable file, a dynamic link library, a patch, and a script.

4.   The method of claim 1, wherein the expected operation is stored in a database.

25   5.   The method of claim 4, wherein the database is located on the data processing system.

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6.   The method of claim 1, wherein the monitoring step, the comparing step, the determining step, obtaining step, and the implementing step are implemented in an agent process.

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7.   The method of claim 1, wherein the monitoring step is initiated in response to an event.

8.   The method of claim 7, wherein the event is a periodic event.

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9.   The method of claim 1, wherein the expected operation is identified during compiling of the program.

10.   A method in a data processing system for managing a program, the method

15   comprising:

        compiling the program to form a set of compiled components;

        generating a profile of behavior of at least one of the compiled components; and

        including the profile in a data area of the program.

20   11.   A data processing system for managing a program, the data processing system comprising:

        a bus system;

        a communications unit connected to the bus system;

        a memory connected to the bus system, wherein the memory includes a set of

25   instructions; and

        a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to monitor operation of the program; compare an observed

operation of the program with an expected operation of the program to form a comparison; determine whether an error has occurred based on the comparison; obtain a solution for the error in response to an occurrence of the error; and implement the solution when the solution is obtained.

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12.   A data processing system for managing a program, the data processing system comprising:

     monitoring means for monitoring operation of the program;

     comparing means for comparing an observed operation of the program with an

10   expected operation of the program to form a comparison;

     determining means for determining whether an error has occurred based on the comparison;

     obtaining means, responsive to an occurrence of the error, for obtaining a solution for the error; and

15   implementing means for implementing the solution when the solution is obtained.

13.   The data processing system of claim 12, wherein the obtaining means comprises:

     executing means for automatically executing a process to analyze the error to obtain an analysis;

20   sending means for sending the analysis to a remote server with a request for the solution; and

     receiving means for receiving the solution in response the request; and

14.   The data processing system of claim 12, wherein the solution is at least one of a

25   replacement executable file, a dynamic link library, a patch, and a script.

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15. The data processing system of claim 12, wherein the expected operation is stored in a database.

16. The data processing system of claim 15, wherein the database is located on the

5   data processing system.

17. The data processing system of claim 12, wherein the monitoring means, the comparing means, the determining means, obtaining means, and the implementing means are located in an agent process.

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18. The data processing system of claim 12, wherein the monitoring means is initiated in response to an event.

19. The data processing system of claim 18, wherein the event is a periodic event.

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20. The data processing system of claim 12, wherein the expected operation is identified during compiling of the program.

21. A data processing system for managing a program, the data processing system

20   comprising:

compiling means for compiling the program to form a set of compiled components;

generating means for generating a profile of behavior of at least one of the compiled components; and

25   including means for including the profile in a data area of the program.

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22. A computer program product in a computer readable medium for managing a program, the computer program product comprising:

first instructions for monitoring operation of the program;

second instructions for comparing an observed operation of the program with an

5 expected operation of the program to form a comparison;

third instructions for determining whether an error has occurred based on the comparison;

fourth instructions, responsive to an occurrence of the error, for obtaining a solution for the error; and

10 fifth instructions for implementing the solution when the solution is obtained.

23. The computer program product of claim 22, wherein the fourth instructions comprises:

first sub-instructions for automatically executing a process to analyze the error to

15 obtain an analysis;

second sub-instructions for sending the analysis to a remote server with a request for the solution; and

third sub-instructions for receiving the solution in response the request; and

20 24. The computer program product of claim 22, wherein the solution is at least one of a replacement executable file, a dynamic link library, a patch, and a script.

25. The computer program product of claim 22, wherein the expected operation is stored in a database.

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26. The computer program product of claim 25, wherein the database is located on the data processing system.

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27.   The computer program product of claim 22, wherein the first instructions, second instructions, third instructions, fourth instructions, and fifth instructions are located in an agent process.

5   28.   The computer program product of claim 22, wherein the monitoring step is initiated in response to an event.

29.   The computer program product of claim 28, wherein the event is a periodic event.

10   30.   The computer program product of claim 22, wherein the expected operation is identified during compiling of the program.

31.   A computer program product in a computer readable medium for managing a program, the computer program product comprising:

15   first instructions for compiling the program to form a set of compiled components;

           second instructions for generating a profile of behavior of at least one of the compiled components; and

           third instructions for including the profile in a data area of the program.

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